AMENDMENTS TO THE CLAIMS

1. (Currently amended) An intensive management apparatus for managing a time-sharing multiplexing network including:

a plurality of terminals;

a plurality of communication apparatuses each for communicating transmitted data accommodated in each of time slots by mapping said transmitted data onto said time slots allocated to a transmission line and allocated in said communication apparatus for transmitting said transmitted data on the basis of line-setting information; and

a plurality of transmission lines connecting said communication apparatuses to each other,

said intensive management apparatus comprising:

a path-information-creating unit for creating path information including a group identifier, termination information of terminating connection points, a path management number assigned to a path connecting said terminating connection points at which said time slots in said communication apparatus are allocated and an allocated-time-slot number;

a time-slot-allocating unit for creating time-slot-allocation information describing allocation of said time slots to a path identified by said path management number included in said time-slot-allocation information at each of said terminating connection points:

a path-information-checking unit for forming a judgment ~~on validity of each of~~ as to whether or not a plurality of paths identified by the same value of said group identifier assigned to a path-information group comprising pieces of path information group describing said paths on the basis of said path information and said time-slot-allocation, are defined correctly between said plurality of terminals,

wherein said path information and time-slot-allocation information are defined separately, and

a result display unit for displaying results of said judgment ~~on validity of said paths~~.

2. (Original) An intensive management apparatus according to claim 1 wherein said path-information-checking unit forms a judgment as to whether or not a time slot is shared by another path pertaining to said path-information group at each of said terminating connection points described in said pieces of path information composing said path-information group on the basis of said time-slot-allocation information.

3. (Original) An intensive management apparatus according to claim 1 wherein said path-information-checking unit forms a judgment as to whether or not said allocated-time-slot number described in specific path information is equal to said allocated-time-slot number described in each of a plurality of other pieces of path information each including the same group identifier as said group identifier included in said specific path information on the basis of said time-slot-allocation information.

4. (Currently amended) An intensive management apparatus ~~according to claim 2~~, for managing a time-sharing multiplexing network including:

a plurality of terminals;

a plurality of communication apparatuses each for communicating transmitted data accommodated in each of time slots by mapping said transmitted data onto said time slots allocated to a transmission line and allocated in said communication apparatus for transmitting said transmitted data on the basis of line-setting information; and

a plurality of transmission lines connecting said communication apparatuses to each other,

said intensive management apparatus comprising:

a path-information-creating unit for creating path information including a group identifier, termination information of terminating connection points, a path management number

assigned to a path connecting said terminating connection points at which said time slots in said communication apparatus are allocated and an allocated-time-slot number;

a time-slot-allocating unit for creating time-slot-allocation information describing allocation of said time slots to path identified by said path management number included I said time-slot-allocation information at each of said terminating connection points;

a path-information-checking unit for forming a judgment on validity of each of a plurality of paths identified by the same value of said group identifier assigned to a path-information group comprising pieces of path information describing said paths on the basis of said path information; and

a result display unit for displaying results of said judgment on validity of said paths,

wherein said path-information-checking unit forms a judgments to whether or not a time slot is shared by another path pertaining to said path-information group at each of said terminating connection points described in said pieces of path information composing said path-information group on the basis of said time-slot-allocation, and

wherein:

said path information includes a line-implementation identifier showing a direction of data transmitted through a path between said terminating connection points described in said path information;

said time-slot-allocation information is created for each of 2 directions of transmitted data at each of said terminating connection points, and

said path-information-checking unit forms a judgment as to whether or not a time slot is shared by a plurality of paths pertaining to a path-information group o the basis of pieces pertaining to a path-information group on the basis of pieces of time-slot-allocation information created for the same direction at a terminating connection point common to pieces of path information composing said path-information group.

5. (Original) An intensive management apparatus according to claim 1 wherein:

said termination included a connection type indicating an interface type of each of said terminating connection points; and

said path-information-checking unit forms a judgment as to whether or not 2 or more terminating connection points each having a terminal interface type are described in pieces pf termination information included in any pieces of path information composing a path-information group where said terminal interface type is said interface type of said terminals.

6. (Original) An intensive management apparatus according to claim 5 wherein:

path information includes a terminal- I/F category if said connection type indicates said terminal interface type; and

if a path-information group includes pieces of path information describing 2 or more terminating connection points each having said connection type indicating said terminal interface type, said path-information-checking unit forms a judgment as to whether or not said terminal interface type of one of said terminating connection points is compatible with said terminal interface type of any other of said terminating connection points on the basis of said terminal-I/F category included in each of said pieces of path information.

7. (Original) An intensive management apparatus according to claim 1 wherein, if a path-information group includes pieces of path information describing 2 or more terminating connection points each having said connection type indicating said terminal interface type, said path-information-checking unit forms a judgment as to whether or not it is possible to connect a path connected to one of said terminating connection points having said connection type indicating said terminal interface type to a path connected to any other of said terminating connection points having said connection type indicating said terminal interface type by sequential connection of adjacent paths sharing common terminating connection points and pertaining to said path-information group.

8. (Currently amended) An intensive management apparatus ~~according to claim 7~~ for managing a time-sharing multi-plexing network including:

a plurality of terminals;

a plurality of communication apparatuses each for communicating transmitted data accommodated in each of time slots by mapping said transmitted data onto said time slots allocated to a transmission line and allocated in said communication apparatus for transmitting said transmitted data on the basis of line-setting information; and

a plurality of transmission lines connecting said communication apparatuses to each other, said intensive management apparatus comprising:

a path-information-creating unit for creating path information including a group identifier, termination information of terminating connection points, a path management number assigned to a path connecting said terminating connection points at which said time slots in said communication apparatus are allocated and an allocated-time-slot number;

a time-slot-allocating unit for creating time-slot-allocation information describing allocation of said time slots to a path identified by said path management number included in said time-slot-allocation information at each of said terminating connection points;

a path-information-checking unit for forming a judgment on validity of each of a plurality of paths identified by the same value of said group identifier assigned to a path-information group comprising pieces of path information describing said paths on the basis of said path information; and

a result display unit for displaying results of said judgment on validity of said paths,

wherein, if a path-information group includes pieces of path information describing 2 or more terminating connection points each having said connection type indicating said terminal interface type, said path-information-checking unit forms a judgment as to whether or not it is possible to connect a path connected to one of said terminating connection points

having said connection type indicating said terminal interface type by sequential connection of adjacent paths sharing common terminating connection points and pertaining to said path-information group, and wherein:

each path information includes a line-implementation identifier showing a direction of data transmitted through a path showing a direction of data transmitted through a path between said terminating connection points described in said path information; and

said path-information-checking unit carries out:

first processing to identify a path connected to a terminating connection point having said connection type indicating said terminal interface type as a path connected to a transmission-side terminal interface type as a path connected to a transmission-side terminal and a path connection type indicating said terminal interface type as a path connected to a reception-side terminal on the basis of said line-implementation identifier;

second processing to set a terminating connection point existing on said path connected to said transmission-side terminal and having connection type other than said terminal interface type as another terminating connection point;

third processing to repeat:

first sub-processing to select a next path sharing said other terminating connection point as a terminating connection point on a transmission side of said next path; and

second sub-processing to set a terminating connection point located on said next path and different from said other terminating connection point as a terminating connection point to be used in next first sub-processing as a substitute for said other terminating connection point, and

fourth processing to form a judgment as to whether or not it is possible to connect said path connected to said transmission-side terminal to said path connected to said reception-side terminal.

9. (Original) An intensive management apparatus according to claim 1 wherein said path-information-checking unit forms a judgment as to whether or not any of said time slots allocated at each of said terminating connection pints is shared by paths identified by different group identifiers the basis of said time-slot-allocation information.